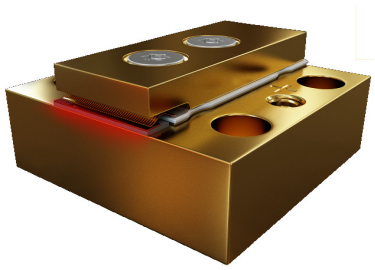
ChiliLase mounted bars

632…678 nm mounted high-power laser bars

Overview

Modulight's ChiliLase product family includes high-power laser bars providing visible red laser light. The bars are mounted on robust CS-type heat sinks, which can be equipped with fast axis collimating optics as per customer request. These multimode devices provide efficient and stable laser light output in CW operation. Adequate cooling should be ensured during operation.



Applications

Industrial	Medical
Illumination Imaging Laser Projectors	Photodynamic Therapy Aesthetic Treatments

Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML1900 [1]	ML1467 [2]	ML1806 [2]	ML1884 [1]	ML1894 [1, 3]	Unit
Peak Wavelength	λ	632 ± 3	633 ± 3	633 ± 3	650 ± 5	678 ± 5	nm
Optical Output Power	P_{OPT}	4	4	7	10	10	W
Operating Current	I_{OP}	10	8.5	18	25	23	A
Operating Voltage	V_{OP}	2.2	2.2	2.2	2.1	2.0	V
Threshold Current	I_{TH}	5	4.5	9	12	9	A
Slope Efficiency	η	0.8	1.0	0.78	0.9	0.75	W/A
Wavelength - Temp. Coefficient	$\Delta\lambda/\Delta T$	0.2	0.2	0.2	0.2	0.2	nm/K
Spectral Width	$\delta\lambda$	1.2	1.2	1.5	1.5	1.5	nm
Parallel Beam Divergence (FWHM)	$\theta\parallel$	5	5	4	4	5	°
Perpendicular Beam Divergence (FWHM)	$\theta\perp$	40	40	40	35	32	°
Fill Factor	W_E	10	10	20	30	30	%

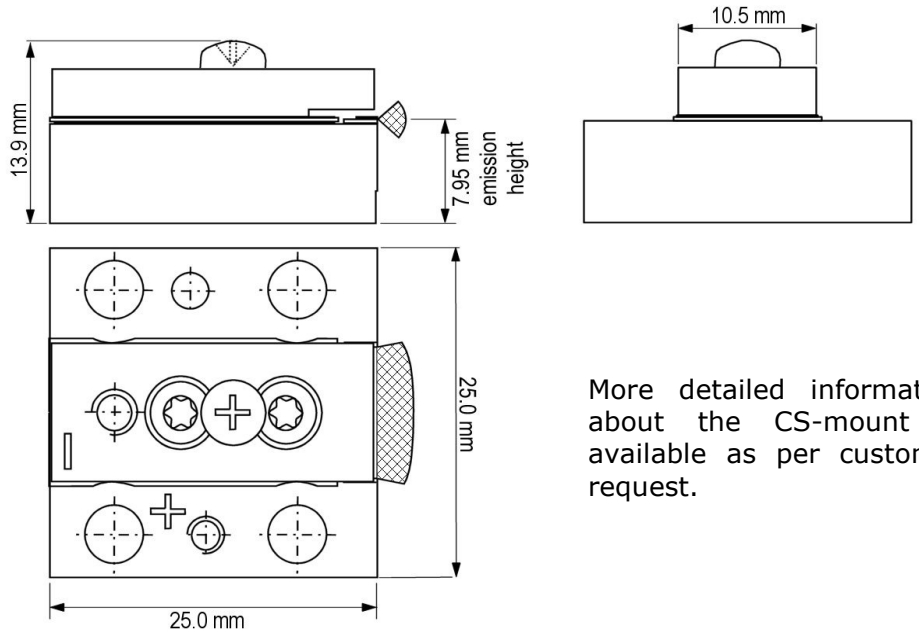
[1] Values of ML1900, ML1884 and ML1894 are typical for CW operation @ 20°C.
[2] Values of ML1467 and ML1806 are typical for CW operation @ 15°C.
[3] Product ML1894 is preliminary.

Absolute Maximum Ratings

Parameter	Symbol	ML1900	ML1467	ML1806	ML1884	ML1894	Unit
LD Reverse Voltage	V_{RLD}	0	0	0	0	0	V
LD Forward Current	I_{FLD}	12	10	20	30	30	A
Optical Output Power	P_{OPT}	5	5	8	12	12	W
Operating Temperature	T_{OP}	0…20 [1]	0…20 [1]	0…20 [1]	0…25 [1]	0…25 [1]	°C
Storage Temperature	T_{STG}	-40…85	-40…85	-40…85	-40…85	-40…85	°C

[1] A non-condensing environment should be ensured over the useful temperature range.

Package Information



More detailed information about the CS-mount is available as per customer request.

Safety Information

- The laser light emitted from this laser diode, although visible, is harmful to the human eye. Avoid eye and skin exposure to the beam, both direct and reflected.
- Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload. Please ensure ESD protection prior to handling the products.
- These Modulight products are not intended for use in systems where product malfunction can reasonably be expected to result in personal injury.

Liability note